

CLAIM AMENDMENTS

Claims 1-4, 9-12, 15, and 17 are being amended and Claim 14 is being cancelled.

1 1.(Currently amended) A back support apparatus for use with a backpack,
2 said backpack having a front panel comprising a back-facing surface
3 supporting a right and a left shoulder strap, extending downwardly from a
4 right and a left upper attachment point, said back support comprising:
5 a pair of elongated inflatable tubular bladders each having a circular
6 cross sectional shape spaced generally parallel to each other and separated by a
7 gap space containing no bladder and adapted to be vertically connected to a
8 front panel of said backpack so that said gap space overlies a vertical central
9 axis of said front panel to provide cushioned back support on opposite sides of
10 a user's spinal column along at least a thoracic region thereof when said
11 backpack is carried on the user's back, said tubular bladders each having an
12 upper terminus extending upwardly at least as high as right and left upper
13 attachment points and the gap space containing no bladder being aligned over
14 the user's spinal column;

15 ~~pump~~ means for inflating said pair of tubular bladders; and

16 ~~valve~~ means for deflating said pair of tubular bladders.

2.(Currently amended) The back support apparatus as in claim 1,

wherein said pair of tubular bladders are spaced at most two inches from each other.

3.(Currently amended) The back support apparatus as in claim 1,

wherein said pair of tubular bladders are spaced to exert a support force against the user's spinal column from opposite sides thereof when said backpack is carried on the user's back.

4.(Currently amended) The back support apparatus as in claim 1,

wherein each tubular bladder has an inflated diameter of at least at most two inches.

5.(Withdrawn) The back support apparatus as in Claim 1,

wherein each bladder has at least one inflation chamber which is inflatable and deflatable independent of other inflation chambers.

6.(Withdrawn) The back support apparatus as in Claim 1,

wherein each bladder has an inflation chamber communicably connected to the inflation chamber of the other bladder by at least one bridge conduit.

7.(Withdrawn) The back support apparatus as in Claim 6,

wherein the at least one bridge conduit has an inflated diameter less than an inflated diameter of each bladder.

1 8.(Withdrawn) The back support apparatus as in Claim 1,

2 wherein each bladder has at least two inflation chambers, each inflation
3 chamber communicably connected to a corresponding inflation chamber of the other
4 bladder by a corresponding at least one bridge conduit to form at least two support
5 sections, each support section being inflatable and deflatable independent of other
6 support sections.5.

1 9.(Currently amended) A backpack system for reinforceably supporting a
2 user's back, said backpack having a front panel comprising a back-facing
3 surface supporting a right and a left shoulder strap, extending downwardly
4 from a right and a left upper attachment point, said backpack system
5 comprising:

6 a backpack having a front panel;

7 a pair of elongated inflatable tubular bladders spaced generally parallel
8 to each other and separated by a gap space containing no bladder, said tubular
9 bladders being positioned so that said gap space overlies a vertical central axis
10 of said front panel , said tubular bladders each having an upper terminus
11 extending upwardly at least as high as said right and left upper attachment

12 point and the gap space being aligned over the user's spinal column said pair
13 of elongated inflatable tubular bladders each having a lower terminus and a
14 midpoint half way between said upper terminus and said lower terminus;

15 means for vertically connecting said pair of tubular bladders to the
16 front panel of said backpack to provide cushioned back support on opposite
17 sides of a user's spinal column along at least a thoracic region thereof when
18 said backpack is carried on the user's back;

19 an upper bridge conduit positioned between said pair of tubular
20 bladders conducting air between said bladders, said upper bridge conduit being
21 positioned between said upper terminus and said midpoint;

22 a lower bridge conduit positioned between said pair of tubular bladders
23 conducting air between said bladders, said lower bridge conduit being
24 positioned between said lower terminus and said midpoint;

25 ~~pump~~ means for inflating said pair of tubular bladders; and

26 ~~valve~~ means for deflating said pair of tubular bladders.

10.(Currently amended) The back support apparatus as in claim 9,

wherein said pair of tubular bladders are spaced at most two inches
from each other.

11.(Currently amended) The back support apparatus as in claim 9,

wherein said pair of tubular bladders are spaced to exert a support force against the user's spinal column from opposite sides thereof when said backpack is carried on the user's back.

12.(Currently amended) The back support apparatus as in claim 9,

wherein each tubular bladder has an inflated diameter of at most two inches.

13.(Withdrawn) The backpack system as in Claim 9,

wherein each bladder has at least one inflation chamber which is inflatable and deflatable independent of other inflation chambers.

14.(Cancelled)

15.(Currently amended) The back support apparatus as in claim 14 9,

wherein the ~~at least one bridge conduit~~ has upper and lower bridge conduits have an inflated diameter less than an inflated diameter of each tubular bladder.

1 16.(Withdrawn) The backpack system as in Claim 9,

2 wherein each bladder has at least two inflation chambers, each inflation
3 chamber communicably connected to a corresponding inflation chamber of the other
4 bladder by a corresponding at least one bridge conduit to form at least two support
5 sections, with each support section being inflatable and deflatable independent of other
6 support sections.

1 17.(Currently amended) The back support apparatus as in claim 9,

2 wherein said means for vertically connecting said pair of tubular
3 bladders to the front panel of said backpack includes a second panel connected
4 to said front panel to form an interstitial volume therebetween, said interstitial
5 volumn for retainably receiving said pair of tubular bladders therein.
